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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,505	04/02/2001	Makoto Horiuchi	5077-000027	3633

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EXAMINER

LEON, EDWIN A

ART UNIT PAPER NUMBER

2833

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AY

Office Action Summary	Application No.	Applicant(s)	
	09/824,505	HORIUCHI ET AL.	
	Examiner	Art Unit	
	Edwin A. León	2833	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5, 12 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5, 12, 16-21 and 23 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 042902.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed February 27, 2004 in which Claims 3, 12 and 19 have been amended, has been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 3-5, 12, 16, and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kameya et al. (U.S. Patent No. 5,128,588). With regard to Claims 3 and 19-21, Kameya et al. discloses a discharge lamp comprising: a luminous bulb (1) in which a luminous material (Column 3, Lines 37-45) is enclosed and a pair of electrodes (3) are opposed in the luminous bulb (1); and a pair of sealing portions (2) for sealing a pair of metal foils (4, 5) electrically connected to the pair of electrodes (3), respectively; wherein each of the pair of metal foils (4, 5) has an external lead (5) on a side opposite to a side electrically connected to a corresponding electrode (3) of the pair of electrodes (3) and being tightly attached to a glass portion (12) extending from the luminous bulb

(1), at least one of the pair of metal foils (4, 5) has a corrugated structure (Fig. 1) in which the metal foils (4, 5) are corrugated along a longitudinal direction of the metal foils (4, 5), wherein the corrugated structure (Fig. 1) has a wave crest extending in a direction of a relative shorter side of the metal foil (4, 5), the corrugated structure (Fig. 1) being provided in the sealing portion (2) and the metal foil (4, 5) having the corrugated structure (Fig. 1) has at least one wave portion (Fig. 1) in an area between an end of the electrode (3) and an end of the external lead (5) of the metal foil (4, 5), each of the pair of sealing portions (2) being a portion in which each of the metal foils (4, 5) is tightly attached to the glass portion (12) and the corrugated structure (Fig. 1) of the metal foil (4, 5) is tightly attached to the glass portion (12). The method limitations are deemed inherent and rejected as shown above. See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 4, Kameya et al. discloses at least one wave crest (Fig. 1) of the wave portion (Fig. 1) being provided in an area on the luminous bulb (1) side from a midpoint of the metal foil (4, 5) in the longitudinal direction of the metal foil (4, 5) (including the midpoint). See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 5, Kameya et al. discloses a plurality of wave crests (Fig. 1) of the wave portion (Fig. 1) being provided in an area between the end of the electrode (3) and the end of the external lead (5) of the metal foil (4, 5). See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 12, Kameya et al. discloses each of the pair of metal foils (4, 5) is a molybdenum foil. See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 16, Kameya et al. discloses each of the pair of sealing portions (2) having a shrink seal structure. See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 17, Kameya et al. discloses the luminous material (Column 3, Lines 37-45) comprising at least mercury. See Figs. 1-2, Column 3, Lines 1-55.

With regard to Claim 18, Kameya et al. discloses a reflecting mirror (Column 3, Lines 37-45). See Figs. 1-2, Column 3, Lines 1-55.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kameya et al. (U.S. Patent No. 5,128,588). Kameya et al. discloses the claimed invention except for the wave portion having amplitude of 1 to 2 mm and a radius of curvature of 1 to 4 mm.

Still, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wave portion having amplitude of 1 to 2 mm and a radius of curvature of 1 to 4 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Allowable Subject Matter

6. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The references fail to teach, disclose, or suggest, either alone or in combination, the twist structure or the corrugated structure is formed in the metal foil by making a difference in a rotation speed of the pipe for a discharge lamp between the electrode side and the external lead side in the metal foil, or by contracting the side tube portion so that a portion on the electrode side and a portion on the external lead side in the metal foil are brought relatively close to each other and in combination with the rest of the limitations of the base and intermediate claims.

Response to Arguments

7. Applicant's arguments filed February 27, 2004 have been fully considered but they are not persuasive. In response to Applicant's arguments regarding Claims 1 and 19 that the Kameya et al. reference doesn't show the corrugated portion being attached to the glass portion, Applicant is reminded that the Kameya et al. reference does meet the claim language in its broadest interpretation. It is clearly shown in Fig. 1 of the Kameya et al. reference that the corrugated structure (Fig. 1) is attached to the glass

portion (12). Applicant's claims call for the corrugated structure (Fig. 1) being attached to the glass portion (12), which in the Examiner's opinion would read on the Kameya et al. reference since the corrugated portion shown in Fig. 1 is attached to the glass portion (12) by means of leads (6). Applicant is reminded that the claims do not call for the corrugated portion to be directly attached to the glass portion. The term "attached" means --connected or joined--. Accordingly, it does not mean that the corrugated portion has to be directly attached to the glass portion. Therefore, the Examiner believes that Applicant's claims would still read on the Kameya et al. reference in their broadest interpretation.

Conclusion

8. **THIS ACTION IS MADE FINAL** necessitated by amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

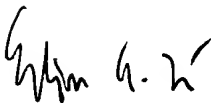
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2833

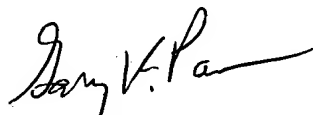
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edwin A. Leon
AU 2833



Gary Paumen
Primary Examiner

EAL
May 8, 2004